

### **Chesapeake Bay TMDL Comments**

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A serious deficiency in the Chesapeake Bay TMDL is that it does not address the underlying issues related to the structure of agriculture in general and the implications for nutrient management in the Chesapeake Bay watershed. Many of the problems with nutrient pollution in the Bay are related to excess nutrients being imported into the watershed to support the strong animal agriculture industry in the watershed. This is driven by global economics and does not necessarily represent widespread mismanagement on individual farms in the watershed. Most of the progress to date has been from improving management on farms. Nutrient management plans that allocate manure based on crop needs accounting for all sources of nutrients, implementation of BMPs such as no-till, cover crops, stream bank protection, and many other conservation and nutrient management practices has resulted in steady improvement in controlling nutrient pollution in the Bay. Improving management should still be a very high priority in the efforts to clean up the Bay and will continue to contribute to the objectives of the TMDL. But, ultimately improving management alone will not be enough to achieve the goals of the TMDL. In reality the success from management improvements has been the low hanging fruit. Continuing with more of the same will not likely result in a continuation of the historical progress that has been made, even with greater emphasis on requiring and enforcing improved management, which seems to be the main focus of this TMDL. A new paradigm is needed. To follow the analogy of low hanging fruit, we need a ladder (a systemic change) to enable us to get at the higher fruit and thus achieve the goals of the TMDL. However, this TMDL, as written, focuses almost totally on requirements for changing management and implementation of BMPs to achieve the goals. Also, within the effort to continue to improve management, most of the emphasis seems to be on maximizing the gross number of acres under nutrient management and the gross number of BMPs installed. There seems to be little thought about targeting to focus on management practices that will have the greatest impact on reducing nutrients in the Bay. This was a major frustration in developing the Ag-WIP in PA because there was little or no information provided on the relative impact of different approaches in the Bay model. It seemed like the only option was the E3 scenario, even though there will likely never be adequate resources to implement the E3 scenario. Thus, there was little basis for selecting components to the WIP that would maximize the return for the cost/effort. Because of this focus on accounting for the maximum number of gross acres and BMPs, we need to be careful that TMDL does not just become a paper exercise with little change actually happening on the ground. A strategy must be developed to enable agriculture to meet the goals of the TMDL in a way that is sustainable. A common misconception is that more strict requirements for improved management practices to control nutrient losses will result in environmental improvement and economic sustainability. Farmer responding to global economics is what has driven this problem. If there were additional economic benefits to be derived from implementing more environmentally based management practices and BMPs, agriculture would already be doing this. The reality is that the economics of improved nutrient management for

environmental quality are negative. The Chesapeake Bay Protection and Restoration Executive Order emphasized "Healthy Waters, Thriving Agriculture". Unless the negative economics associated with the structure of modern animal agriculture are addressed, "thriving agriculture" will not be possible under this TMDL as current drafted. If agriculture is given the where-with-all to change, it has been demonstrated over and over throughout our history that agriculture will respond positively. A fundamental underlying problem is that one of the reasons we have such cheap food in this country is that we are not paying for the environmental consequences of our current food production systems when we purchase our food. The reality is that if we what food produced in a way that does not result in water quality degradation, it will cost more and the food consumers not just the food producers should bear that cost. Improved management will automatically follow structural changes that provide appropriate incentives for change. This must be addressed as part of the TMDL if it is going to be successful. Any plan that assumes that we can simply manage our way to meeting the TMDL goals and maintain a viable sustainable agriculture is unrealistic. Ideally, in addition to improving nutrient management, emphasis must be placed on developing strategies for structural changes in the food system which recognizes and integrates the true cost of producing food without environmental degradation and pays for the other ecological, economical, and social benefits of agriculture as a land use in the watershed. Alternatively if policies cannot be developed to internalize these environmental costs in food production, these costs must be borne by public funds or the cost of addressing water quality concerns must be weighed against the other benefits of agriculture in the watershed and a decision to severely limited agriculture in the watershed may be necessary. The backstop plans in the TMDL recognize this reality of the costs associated with this TMDL because EPA is confident that these reductions can be achieved because point sources have the ability to pass the cost of environmental protection on to the consumer. Agriculture does not have this ability which is why EPA has little confidence in Ag NPS plans. Anyway you look at it there will be a substantial cost to achieving the goals of the TMDL. This must be explicitly recognized in any WIP. Someone has to pay for the TMDL. It is a matter of who and how that has not been addressed.

I have concerns with how the Bay Model is used in the TMDL. Obviously we have to use the model for planning because we cannot do experiments on the whole watershed to see what will work and what won't. However, from what I have seen, the model was of little or no use to us in developing the PA Ag-WIP. A serious deficiency in the development of the State WIPs was the lack of good information to use about how various practices or scenarios would impact the Model evaluation of the impact of proposed BMPs toward achieving the TMDL in making decisions about what should be in the WIP. Only gross results from the model to consider but no real insight as to what specific factors were resulting in the modeled results were available. Thus it was very difficult to decide what to change if the model did not meet the allocations. Also, there was often confusion about how the model handled certain scenarios. Many time the assumptions were totally different from what the committee thought. For example, a major component of the TMDL is cover crops. In PA, cover crops have been promoted as a critical component of manure management. However, in the Model, if cover crops are used in a plan with manure they are not counted in the Model. Also, we were told repeatedly that the Model has serious problems especially in nutrient management! Since the TMDL focuses on nutrient management this is a serious deficiency in the process. Consequently, the WIP was developed almost totally based on,

hopefully, educated guesses regarding how it would be evaluated in the Model. In the end, the PA Ag-WIP ended up mostly just a compilation of what is going on the state already because there was really no basis for suggesting changes.